

Annual Report

OF THE

Public Health

OF THE

NEWTON ABBOT

(RURAL) and

Newton Abbot and Dawlish

(URBAN)

SANITARY DISTRICTS

For 1896.

BY

W. HARVEY, F.R.C.S.,

Medical Officer of Health.

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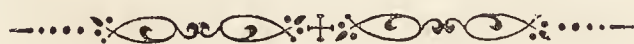
Medical Officer of Health.

PLACES. 1896.	Birth-rate	Annual Death-rate per 1,000 of population.									Deaths under one year to every 1000 births
		Total Death-rate	From seven Zymotics	Small-pox	Measles	Whooping Cough	Scarlatina	Diphtheria	Continued Fever	Diarrhoea	
England and Wales	29.7	17.1	2.18	.02	.56	.41	.18	.29	.17	.55	148
Newton, rural	24.1	*12.3	.5	..	.04	.16	.12	.08	.04	.04	82
Newton, urban	25.5	14.3	.5	..	..	.1	..	..	.1	.3	102
Dawlish.....	22.7	16.3	.7	..	..	.7	..	..	..	..	141

* Lowest record.

Annual Report.

1896.



NEWTON ABBOT (RURAL.)

The number of deaths registered in this district during 1896 was 305, of which 171 were in males and 134 in females, equal to an annual rate of 12·3 per 1000 of population, the latter being for the sake of the round figure calculated at 24800, which is 8 more than given in the table. This is the lowest rate yet recorded in the annals of the locality, the only occasion on which it has fallen below 13·0 per 1000, and the fact of its following a low figure in the preceding year makes it more satisfactory still. The high temperature and dry weather of the first quarter, almost always the most fatal of the four, were no doubt important factors in this.

Under the age of one year there were 50 deaths ; between 1 and 5 years, 26 ; between 5 and 15 years, 9 ; between 15 and 25 years, 12 ; between 25 and 35 years, 24 ; between 35 and 45 years, 14 ; between 45 and 55 years, 27 ; between 55 and 65 years, 37 ; and over the latter age, 116.

The infantile death-rate, the deaths under one year to every 1000 births, was 82, an excellent figure, which has only once been surpassed.

The deaths in the four quarters were serially 91, 75, 61 and 78.

The births of 292 males and 316 female children give a rate of 24·1 per 1000, which is a slight advance on the two previous years. Thus the natural increase for 1896 was 303, almost as many as the deaths : indeed the births would have been more than double the number of the deaths, but for a fatality from violence that has only once been exceeded. This, however, only makes the general

Death-rate, &c., in each parish.

PARISHES.	Ordinary Zymotics.						Influenza	Consumption	Other Tubercular Diseases	Apoplexy	Cancer	Infantile Inanition	Total Death-rate per 1000.
	Whooping Cough	Scarlatina	Measles	Diphtheria	Diarrhoea	Continued Fever.							
Ashburton	3	1	1	1	1	9·4
Abbotskerswell	1	...	...	...	...	11·6
Bickington.....	2	...	17·4
Bishopsteignton	1	...	...	2	1	1	7·4
Bovey Tracey	1	...	...	...	3	...	3	3	1	12·2
Buckland	nil
Broadhempston	1	...	...	...	19·0
Coffinswell.....	1	...	...	15·0
Coombe, Haccombe	1	...	...	11·0
Chudleigh	1	1	1	1	3	1	11·0
Denbury, Torbrian	1	...	...	...	1	...	...	1	...	...	...	...	9·7
Dawlish	1	1	1	1	...	14·0
The Ogwells	1	1	...	12·9
Highweek	1	...	...	...	...	1	...	3	3	1	1	1	14·0
Hennock.....	1	1	...	...	...	...	11·7
Ilsington	1	...	...	...	...	...	1	1	1	1	1	11·0
Ipplepen	1	...	...	...	...	...	...	1	...	...	...	13·3
Iddeford	1	...	...	...	...	...	...	...	...	10·6
Kingskerswell	1	...	...	...	...	...	1	...	2	...	1	18·7
Kingsteignton	2	...	...	...	...	...	...	2	2	1	2	1	15·1
Lustleigh	1	...	...	...	...	7·4
Moreton	1	...	2	1	9·7
Manaton	nil
North Bovey.....	1	...	...	7·2
Stoke	1	21·5
Trusham	6·2
Teigngrace	nil
Widdicombe	1	...	...	...	...	2	...	...	...	...	5·4
Woodland	1	1	...	16·3
	4	3	1	2	1	1	3	21	12	18	19	10	...

Violent deaths are not considered in the above, but in each of the three parishes, Bishopsteignton, Dawlish and Ilsington, the rate is enhanced by the death of one visitor.

Table of Deaths occurring during the Year 1896, in the several registration Districts of the Newton Abbot Rural Council, classified according to Diseases and Ages, and shewing the Death-rate, Birth-rate, and Population of each Locality.

SUB-REGISTRATION DISTRICTS.	Population.	BIRTHS.		DEATHS.					MORTALITY FROM SUBJOINED CAUSES.															
		Registered.	Birth-rate per 1,000 annually.	At all Ages.	Death-rate per 1,000 annually.	Under 1 year.	1 and under 5.	60 and upwards.	Under 1 Year to every 1000 births	Small-pox.	Measles.	Scarlatina.	Diphtheria.	Whoopings Cough.	Continued Fevers.			Diarrhoea.	Phthisis.	Bronchitis, Pleurisy, Pneumonia.	Heart Diseases.	Injuries.	Other Diseases.	
															Typhus.	Typhoid.	Other or Doubtful.							
Newton (Rural)	7,266	186	25.6	101	13.9	17	11	42	91	1	..	4	..	1	7	10	16	9	53
Chudleigh	6,718	173	25.8	77	11.3	11	5	35	64	1	1	6	14	7	5	43
Ashburton	5,516	136	24.7	61	11.1	14	4	22	103	..	1	..	..	..	..	..	..	..	5	7	5	1	42
Moretonhampstead	2,692	60	22.3	27	10.0	3	3	11	50	..	..	..	1	..	..	..	..	..	1	1	6	3	15
Sea-border	2,000	53	20.3	39	15.0	5	3	22	94	..	..	1	..	..	..	..	..	1	2	7	2	..	26
TOTALS, 1896.....	24,792	608	24.6	305	12.3	50	26	132	82	..	1	3	2	4	..	1	..	1	21	39	36	18	179	
" 1895.....	24,737	591	23.9	353	14.3	69	27	161	117	..	14	1	..	4	..	3	1	1	16	70	30	15	198	
" 1894.....	24,681	563	22.8	378	15.3	64	27	159	114	..	..	..	1	11	..	5	..	3	28	75	44	17	194
" 1893.....	26,626	652	24.4	391	14.7	70	32	177	107	..	..	2	3	7	..	2	..	4	37	61	40	13	222
" 1892.....	26,440	678	25.6	418	15.8	57	29	207	84	..	1	..	..	2	..	..	..	6	19	88	36	21	245
" 1891.....	26,340	665	25.2	403	15.3	71	37	193	107	..	12	3	..	11	..	..	..	3	36	57	18	14	247

rate the more gratifying. A somewhat unsatisfactory point is shewn in a certain growth of mortality from consumption and other tubercular diseases : this, however, is only in comparison with 1895 and 1892, not with other years.

The chief causes of fatality, besides those shewn in the table, were constitutional diseases, other than tubercle, 25 deaths, of which 19 were assigned to cancer ; diseases of the nervous system, 41 ; of the digestive organs, 27 ; and of the urinary, 9. Five were due to premature birth, 26 only to old age, and no less than 16 to ill-defined causes, of which the bulk, 13 in number, was inanition in infants. Influenza caused only 3 deaths, against 14 in the previous year, so it may be assumed that that long drawn infliction is gradually drawing to an end.

The chief meteorological characteristic of 1896, was the mildness of the spring and the prolonged droughts, not only of that season, but of the summer and autumn also. The abundant rains of the fourth quarter were not enough to restore the average fall, and the total deficiency on the 12 months was about 9 inches, although, of course, varying in different localities.

ZYMOTIC DISEASE. From the seven ordinary diseases of this type there were 12 deaths, viz., measles, 1 ; whooping cough, 4 ; scarlatina, 3 : diphtheria, 2 ; typhoid, 1 ; and diarrhœa, 3. The rate from this is 48 per 1000. Besides these there were amongst the mortality from causes Zymotic or otherwise preventible, two deaths from erysipelas, one from thrush, two from alcoholism, and as before said, 3 from influenza.

MEASLES AND WHOOPING COUGH. These have not prevailed very extensively ; there were, however, a number of cases of the latter during the early months of the year at Bishopsteignton, Kingsteignton and on the opposite side of the estuary at Coombe.

SCARLATINA. A goodly number has come under observation as usual, but only in Ipplepen, Kingskerswell and the hamlets around Cold-east was it in any degree epidemic. Numerous individual cases were notified in Bickington and the more central parishes of the union. In the first-named village I availed myself of the excellent opportunity presented to make some observations on its infectivity and was surprised to find how much geater this was during the earlier stage than later in the course of the malady when the children's skins were desquamating. Thus, when an affected child occupied the same room as others, the latter generally showed symptoms in about a week ; if another room in the same small cottage, in about a fortnight ; the cases of infection in the final stages, say in the 5th or 6th week, were few indeed. There were, however, two instances both in better class houses in which a second child was affected

more than two months after the first. Whether these were newly-acquired or due to a lingering contagion is not clear. I am disposed to think that the old belief about surface "peelings" being a common source of infection will undergo much limitation from the experience of future observers.

DIPHTHERIA. The year almost began with an outbreak of this at Brookfield, which although adjoining Lustleigh and essentially a part of it, is really within the border of Bovey Tracey parish. There had been some preliminary "nasty throats"; indeed, there is reason to believe that the infection was introduced in the previous October and had continued in mild form during the interval. There were at least 9 cases of sufficient severity to be entitled diphtheria and sundry others approximating thereto. Two points are worthy of note—the first case called by the name was in a certain house in a short terrace with insanitary conditions, there being a hand-flushed closet, communicating with the kitchen, the room chiefly occupied, an order to remedy this previously issued by the Authority having been neglected. The second point is that the only fatal case was the solitary one not treated with antitoxin. The history of this epidemic offers a good illustration of the proneness of the public mind to exaggeration in regard to disease. To read the papers and hear the talk of the time would almost induce the belief that the people in Lustleigh were dying wholesale, whereas the facts are these—there was no fatality from diphtheria in that parish and the general death-rate for the year is the best in its annals (see table), there being only 3 fatalities amongst a population exceeding 400 people. However, an alarm of this sort invariably induces attention to sanitary matters, and the beneficial outcome of this outbreak will be the introduction of a water supply.

TYPHOID FEVER, &c. Nearly a dozen cases of this, some of them scarcely exceeding a mere febricula, came under observation. The only fatal one was in an isolated house on the Highweek bank of the Lemon, draining into the river bed, giving rise there to a perennial and most troublesome nuisance, that cannot be rectified until the locality is sewered. There was also a case at Torquay, which, I believe, likewise ended badly, associated with Stanlick's pump at Moretonhampstead. The young woman had been visiting at one of the houses supplied from this source. The water contained $16\frac{1}{2}$ grains of chlorine in a gallon and absorbed oxygen very freely. I had previously advised its closure: this case associated with other sickness in the house so strengthened my hands that I was enabled to cause the dismantling of the pump forthwith, and likewise the abolition of a dangerous nuisance arising from a neighbour's closet that projected into the house in question. At this time I found the almost disused pump in Ballamy's court yield so dangerous a water that I insisted on the removal of the "sucker" there and then, lest children in play might drink from it. The wells in Moreton are of such a character, and the public water supply so good, that in my view every pump in the town should be uprooted. In connection with typhoid fever, we have had during this year a remarkable and wholly exceptional experience—Kings-teigton, for the first time, has had a practical, indeed, it would be scarcely too much to say a complete immunity from this disease. The Notification Act came into operation on the 1st of August, about the time when the usual Autumnal typhoid begins, and not one case in this large village was reported to me. This entirely unexpected absence of a disease which has hitherto been endemic there needs a brief allusion or attempt at explanation. What can it have been due to? I am unable definitely to affirm, but there is one circumstance associated with the improvement and only

Record of Water Analysis.										
No	Source.	Date.	Grains per Gall.		Parts per 1,000,000			Oxygen taken.		REMARKS.
			Total Solids	Chlorine.	Free Ammonia.	Organic Ammonia.	Nitrogen from Acids.			
1	Lustleigh village pump.	Feb. 25	19.5	2.9	.04	.03	.12	moderate		good, physically and otherwise.
2	Sedgwell farm. Ideford.	May 21	40.0	3.3	.06	.25	...	not great		physically unfit, on June 5th an analysis shewed deterioration.
3	"Well" at Liverton.	July 14	17.0	1.3	.06	abt .30	...	large		a superficial spring, received into a pit: deposits a gelatinous material, &c.: very inferior water.
4	disused well discovered in Work-house.	Sept. 2	36.0	2.6	.00	.10	...	moderate		a fair water, but contains large black flocculi. Use will improve it.
5	Eastdon Cottage, Dawlish.	Oct. 15	28.0	6.2	.00	0.35	...	very small		a good water, but seemingly affected by adjacent sea.
6	same as No. 3.	Dec. 7	...	1.1	.03	.28	...	freely		original water has strong trace of iron. That at the taps has a reddish sediment but no dissolved iron. Water somewhat milky, and deposits abundant flocculi which become stringy.

one that can in any way be referred to as a cause, viz., the insertion of a number of vent shafts into the public sewers during the previous year. It may be mentioned here that these sewers are of indifferent workmanship and design, badly laid and in so far as yet examined, found to be partly or wholly silted up. One sewer, indeed, that has just been renewed was discovered to have rising gradients in it, rendering it, of course, inoperative. Moreover, the traps are nearly all badly fitted, and if the introduction of the vent shafts has not converted all these into air inlets, at all events the discharges of sewer gas into the vicinity of dwellings has been checked.

DIARRHŒA, &c. The only death from this was in the person of an elderly visitor who stepped across our border at Cofton whilst ill. Two outbreaks of anthrax at farms have come under observation through the agency of the police.

SANITARY PROCEDURE. On August 1st, the Notification of Diseases Act came into operation, and 38 cases were subsequently reported to me through its operation, besides two in the Workhouse.

At length there is a full prospect of the large village of Kingsteignton having an excellent water supply, matters having progressed so far that tenders for the work have been advertised for. The cost is estimated at £2,200. At the Local Government Board enquiry on the 15th of September, the proposals of Mr. S. Segar, Surveyor to the Council, seem to have given complete satisfaction, and elicited only the most minor corrections or suggestions. Thus there is an immediate probability of this long drawn and long fought question coming to its proper end, and undoubtedly it will conduce to the gratification of all concerned. It is at present, I believe, the biggest community in the West, without a public water supply. At Lustleigh, too, the result of the epidemic of diphtheria and the comments caused thereby has been not only to get the drainage of the village school thoroughly renewed, but has aroused the inhabitants to earnestness in the matter of water, and that problem now is on the high road to solution. The supply of Bishopsteignton is to be enlarged by the inclusion of the Hollowcombe spring, and this also is in an advanced stage. At Kingskerswell, the same important question has again come forward actively, but no special progress has yet been made. I had suggested, previous to the renewal of this matter on the old lines, that the spring at Dainton Quarry be utilized for Ipplepen, Abbotskerswell and Kingskerswell, but the proposal did not meet with support. The two first-named need water very badly. When Kingsteignton and Kingskerswell are supplied, there will be no places in the district containing 1,000 people without water: the

village of Ipplepen with 6 or 700 people will then be the largest not so endowed ; there are, however, serious physical difficulties to be encountered there. A supply is also badly required for the group of villages in the vicinity of Blackpool and Livaton, and a spring on Ingsdon estate it is thought will serve the purpose, but public acceptance has not yet been accorded. The water used in some of these hamlets is of doubtful quality and precarious in amount. Attempts to sink wells are often failures as the subsoil contains much clay and lignite ; the latter, although of geological antiquity and, probably harmless, yet renders a water objectionable, and imparts to it a large amount of organic ammonia. At Abbotskerswell school some excellent improvements referring to water and drainage have been effected on lines laid down by Mr. Riggs, assistant inspector. At Moreton, a line of sewer has been constructed at the back of Cross Street, and by degrees that of the whole town is being renewed. Thus, it will be seen that although the year 1896 has not been marked by the completion of any great work of improvement, yet many have been so far advanced that its successor will show some useful changes.

The drainage and water supply of Ipplepen, have given rise to a good deal of discussion, but no successful method of surmounting the difficulties involved have yet been found, that is to say on anything like appropriate and reasonable conditions. The system of drainage that now obtains causes the brook to be a nuisance to certain houses on its banks, but to introduce an interminable arrangement of sewers might not improve matters. I hold that an entirely rural system is better than long reaches of sewers without a water supply, pipes being intended for the water carriage of effete matter and not for its mere concealment or retention ; it is this evil that has afflicted Kingsteignton for so many years, causing much sickness and fatality there of a special sort. Hence, on principle, I oppose the laying of lengthy sewers, especially those having little fall, unless water is first introduced. The group of houses near Newton gas-works, which are in Highweek parish, and stand little above sea level, drain into cesspits ; the subsoil being a permeable sand and under tidal influence, has hitherto permitted a very free soakage, but there are signs of obstruction gradually arising and a troublesome problem will here have to be dealt with. A further reference to this locality is made in a previous paragraph on typhoid fever ; in my view, no dwellings should be erected in this part of Newton

Abbot; but for recreation grounds, warehouses, wharfs, &c., it is a well-adapted site; happily, this is what it is coming to, and probably, no more houses will be erected in this neighbourhood.

Some desire has been expressed for action under the Housing of the Working Classes Act at Ashburton. In compliance with a memorial signed by 15 householders, Mr. Segar and myself visited the town and found that as regards these persons it had no real foundation; nearly all having appended their names on some side issue, such for example as the desire for a garden. There is a certain amount of crowding, rather more I think than in the other towns of the district; it is, however, showing a tendency to abate, as the population is rather a declining one and new houses are occasionally built. This decline seems to me to be due to the factory operatives who work at Buckfastleigh, more than three miles off, gradually finding their way thither. The subject will receive further investigation at an early date, and will be specially reported on.

On June 25th a committee of five members of the County Council assembled at Newton to consider the three sites presented for a joint isolation hospital. These were located as follows—on the Ashburton road between Ess hill and Mile end—at Kingsteignton and at Forches Cross. The second of these had been provisionally purchased. The committee found themselves restricted in their choice by an unreasonable clamour and selected the least eligible of the three positions, that at Forches Cross. This has met with the approval of the Rural Council but the Urban Council objects strongly and is appealing. Hence progress is entirely arrested. I am of opinion, however, that the site at Forches Cross can be made to serve the purpose fairly well, although it is an unnecessary distance from the great central mass of population and will, therefore, be costly to administer.

No progress had been made during the year in the matter of public scavenging in the small towns of the district.

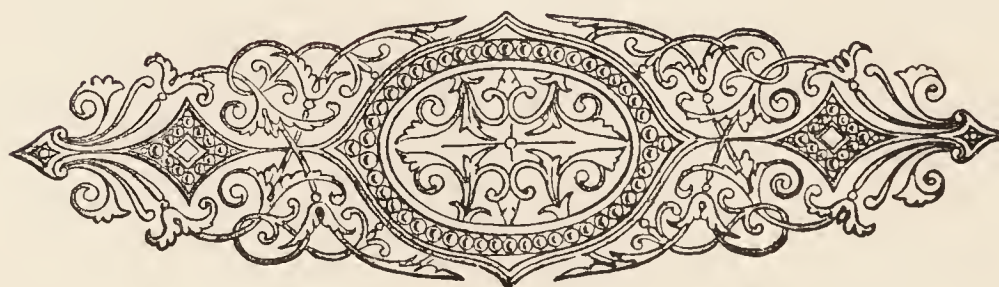
Mr. S. Segar, Surveyor, and Mr. Riggs, Inspector, report the following sanitary details in their respective departments:—

On the South side of Cross Street in Moretonhampstead, a new sewer, 700 feet in length, has been laid, and the house connections completed. The main sewer in Chudleigh has been improved and two extensions carried out: the old stone sewer in Mill Lane has been

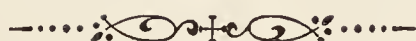
replaced with a modern construction. Drainage schemes have been prepared for Ipplepen, Chudleigh Knighton and Mile End.

The inspections of dwelling houses number 1,037, with 480 re-inspections. The drains of 16 houses have been tested with the asphyxiator and having in all cases but one been found defective were examined after completion of the necessary work. The slaughter houses and dairies have been periodically visited. Ninety-nine formal notices were served, of which 77 were complied with. Verbal notices have been given in numerous instances and practically all complied with. Legal procedure to provide w.c's. has been resorted to on two occasions; four houses at Brookfield, Bovey, were thoroughly cleansed and disinfected after diphtheria, bedding and clothes being destroyed and paid for to the value of £3. Brookfield itself also was systematically disinfected. House to house inspections have been made at Moreton, Chudleigh, and in part of Kingskerswell. At Lustleigh and Abbotskerswell the sanitary conveniences of the schools have been thoroughly renovated.

The notices served comprised 27 for defective drains, 18 for swine nuisances, 19 referring to w.c's. or privies, 19 to general nuisances, 5 overcrowdings, 7 defective water supplies, 2 houses unfit for habitation and 2 dirty slaughter houses.



NEWTON ABBOT (URBAN).



There were registered in this district during 1896, one hundred and thirty seven deaths, 71 in males, and 66 in females, equal to an annual rate of 14·27 per 1000. In the successive quarters the numbers were 35, 30, 37 and 35.

The chief causes of fatality, other than those given in the appended table, were constitutional diseases, excluding the tubercular, 15 deaths, of which 12 were assigned to cancer ; diseases of the nervous system 12, of which 2 were due to infantile convulsions, and 5 to apoplexy ; diseases of the digestive organs 13, and of the urinary 2. No less than eight were certified as premature birth, and seven were attributed to that indefinite, yet significant thing, infantile debility ; thus, no less than 15 deaths were due to weakness immediately preceding or following birth. On the other hand, only six were ascribed to old age. These figures are somewhat characteristic of the mortuary returns of the town. An exceptionally high number, seven, were due to violence, and amongst them was a case of murder, the first that has appeared in the returns of the district.

Under the age of one year there were 25 deaths ; between 1 and 5 years, 9 ; between 5 and 15 years, 3 ; between 15 and 25 years, 8 ; between 25 and 65 years, 42 ; and over the latter age, 50.

The infantile death-rate, the deaths under one year to every 1000 births, was 102.

The births were 245 in number, 136 boys and 109 girls, giving a yearly rate of 25·52 per 1000. This is a decline on the previous year, but not quite so much as it seems, owing to the corrected estimate of population. The natural increase of population, *i.e.*, the excess of births over deaths is, therefore, 108

In the Workhouse, situated in Newton Abbot, there were 46 deaths, 20 in males and 26 in females. They are thus assignable to the various sanitary districts comprised in the Union: Torquay, 17; Newton Urban, 2; Teignmouth, 4; St. Marychurch, 1; Dawlish, 3; the Rural parishes, 18; and one stranger.

The population of the district has grown at such a rapid rate that it needs special reference; indeed the rather high birth and death-rates shewn during the last year or two are to some extent thus explained. Building has been going on very actively since the census of 1891, which shewed a population of 8,521. In the first place, a whole suburb, comprising several streets and terraces, has sprung up in the Bowden Hill locality. Here 180 houses have already been erected, and are occupied almost before completion; this work is still actively proceeding. A large number, about 50, have been built at the top of Wolborough Street, many also in The Decoy, lesser numbers near Forde House, near Fairfield, on the hill and elsewhere. Altogether there must have been constructed since the census about 300 dwellings. At the beginning of 1896, there were 2,036 houses on the rate book, and these have been considerably added to during the last twelve months. The town, therefore, can scarcely contain less than 10,000 inhabitants; at five per house the number would be more. I have, however, for statistical purposes estimated the number at 9600, and the foregoing rates are worked out on this figure.

The climatological conditions of the year are briefly given in the rural part of these reports.

ZYMOTIC DISEASES. There were five deaths referred to the ordinary maladies of this class, viz., one typhoid, one whooping cough, and three diarrhœa, from which arises a rate of .52. There were only 26 notifications under the Act, including 11 scarlatina, 1 diphtheria, 12 continued fevers, and 2 erysipelas.

The number of scarlatina cases just mentioned is no measure of those that actually occurred, as the increasing mildness of the disease diminishes the amount of medical attendance necessary; no fatality resulted, and in so far as I observed there was little danger to life in any one of them. It is, however, even in its lightest form, a treacherous disease; indeed, obstruction of the kidneys and permanent constitutional damage is more likely to follow the slighter than the severer cases in which the patient is necessarily confined to bed for a considerable time. Although there has been no epidemic prevalence during the year, yet there was a remarkable outbreak of fever in a family living in No. 11 Court, East

Street. This house was an isolated one of three stories, having four external walls, and no sewer connection of any sort inside. The lower storey was used as a store room, but held nothing of the putrescible sort. They were singular cases, transcending my experience, beginning with a brown almost black tongue which cleaned rapidly, instead of the streaked tongue so characteristic of ordinary typhoid. I was at first disposed to think they might have been due to fœcal poisoning, as the 5th and younger children had had a feverish diarrhœa for a couple of months. I subsequently gathered that the children had eaten a large quantity of mildewed oranges which might have been the origin of the evil. Be this, however, as it may, there was no sufficient explanation in the sanitary circumstances of the Court and no resident in the other houses shewed the slightest sign of the disease. The town authorities were put to a good deal of cost for nurses, food, destruction of bedding, disinfection, etc.: happily they were taken into a spare ward in the adjacent Workhouse as paupers. If they had been left in their own home, at the tender mercy of their usual conditions, there would not have been three recoveries out of the four cases. There was also rather a dangerous case of typhoid in White's Court, the house containing only one bedroom and others had to sleep in dangerous proximity to the young adult who was affected. These are lessons that illustrate the advantage of an isolation hospital. Before dismissing this subject I may add that the courts have had a full share of continued fever during 1896, as in addition to those mentioned, Nos. 3 and 1 Courts in Wolborough Street had cases.

The isolation hospital is still in nubibus, although the growth of the town renders its necessity greater by degrees. Newton and Highweek now contain about 12,500 people, and Kingsteignton with nearly 2000 more is only a mile off. The subject has been referred to in the Newton rural report. The Urban District Council are appealing against the present position of this subject, thinking the committee of the County Council did not select the Forches Cross site on the evidence presented, and believing it would be better for the town to be separated from partnership with the Rural Authority in the matter. Highweek, however, being essentially a part of the town, having the same sewers, gas, water supply, and almost the same streets, must of course use the same isolation hospital. A movement for its inclusion in the Urban district is now actively on foot, nothing apparently but the difficulty of agreeing to terms being in the way. Newton is in the exceptional, if not unique, position of being without a public debt; indeed it has a valuable asset in a new and extensive market premises, which I hear some are desirous of retaining in the proposed amalgamation, excluding Highweek from profitable participation.

A nuisance arising from pigs and the preparation of their food which existed in the centre of the town between Courtenay and East Streets, led to a successful prosecution. Although in an open neighbourhood, this had given rise to many bitter complaints.

I have had occasion during the year to complain of the poultry nuisance on the Marsh, to remonstrate against a class of house (otherwise good) arising on Bowden Hill, having front rooms with a floor area only 9 feet square, and to point out the disadvantage arising in the long row of houses

	1896	1895	1894	1893	1892	1891	1890	1889
Smallpox ... ..	...	...	...	...	...	...	...	...
Measles ... ..	...	5	...	...	1	13	1	...
Scarlatina ... ..	...	2	...	1	1	...	...	1
Whooping Cough ..	1	3	16	2	1	...	13	...
Diphtheria ... ..	...	1	2	3	...	4	1	...
Continued Fevers ...	1	2	...	1	1	...	1	3
Diarrhœa	3	...	...	5	2	...	...	2
Deaths from 7 chief	5	13	18	12	6	17	16	6
Zymotics	13	11	12	13	7	4	8	12
Phthisis	3	6	4	3	1	3	5	9
Others Tubercular ...	15	27	27	26	23	25	24	18
Bronchitis, Pneumonia, &c. ...	17	12	9	10	14	26	16	14
Heart Disease... ..	7	5	1	4	3	4	2	1
Violence	77	87	76	71	79	65	72	75
Other Diseases	137	161	147	139	133	144	143	135
TOTAL FOR EACH YEAR. ...	137	161	147	139	133	144	143	135
General Death-rate per 1,000 ..	14·3	17·5	16·1	15·9	15·3	16·7	16·2	15·5
Zymotic Death-rate	·5	1·4	2·0	1·4	·7	2·0	1·8	·7
Birth-rate	25·5	26·8	27·2	26·9	26·0	25·2	24·3	23·3
Deaths under 1 yr to 1000 births	102	126	157	147	116	121	136	90

called Fairfield Terrace, from there being no road or path at the back giving access to the scavengers. Perhaps the most important matter I have adverted to is No. 9 Court, Wolborough Street. The word uninhabitable has, of course, a relative meaning subject to conditions, limitations, and different interpretations. This Court, in its narrowest part, is only about 4 feet wide, and having houses on both sides is, I consider, unfit for habitation, in the sense that it is not fit to rear children in; indeed, most of them now there shew signs of degeneracy. The committee appointed to enquire into the subject were inclined to support my views and to purchase the block of buildings that intervenes between Nos. 9 and 10 Courts, so as to thoroughly open up both, but the cost seems to be appalling and makes the Council pause. Perhaps the time is scarcely ripe for dealing with the numerous Courts of the town under the clauses of the Housing Act, and other methods may ultimately be found of attaining the desired end.

I have been requested to make a few remarks on the advantages of Newton as a resort for visitors.

Newton, although very picturesquely situated and only 5 or 6 miles from the sea in two several directions, does not assert any particular claim of its own on the ground of beautiful scenery, for all is beautiful in this neighbourhood, although it yields the palm to none in this respect. South Devon, however, with due regard to climate, accessibility, physical configuration and other merits, may rightly allege to all persons contemplating a change, its pre-eminent attractiveness for that purpose. Newton, being a great railway centre, has every part of this region, so to speak, at its doorstep; they are indeed its suburbs, every town between Exeter and Plymouth being within easy access, each forming the subject, as it were, of an hour's or a day's excursion. Teignmouth and Dawlish, with their long, flat beaches, so loved of children, and their diversified coast scenery, are its bathing and boating places—only a few minutes off. Torquay, a queen amongst watering-places, is its fashionable resort at all seasons and distant only a quarter of an hour. The historic town of Plymouth, with sights not to be surpassed in the world, with attractions peculiarly its own—its Hoe, its Sound, its Dockyards, its fortifications, its generations of men-of-war, from the three-decker of Trafalgar to the ironclad and torpedo catcher of to-day—is only an hour off. Exeter, the capital of the county, is only about half-an-hour distant. Quaint old Dartmouth, with its lovely estuary, its naval training ships for cadets, and an annual regatta at which the yachts of England assemble in such numbers as to be almost beyond belief to the uninitiated, is at a shorter distance still. Trips by land and trips by sea are available on every side. But this is not all, for above these the glorious slopes and tors of Dartmoor are its breathing ground; there amid the brakes and briars of a primeval wilderness absolute solitude may be obtained, and yet community with nature in awe-inspiring form be held. The popular appreciation of the moor is increasing with experience and organized excursions into it are of daily occurrence in the summer. There is no atmosphere more stimulating than that of these hills; it is an experience in itself to ascend one or two thousand feet, to

feel the expanded feelings that arise from the inhalation of abundant ozone and the removal of an inch or two of pressure from the barometer and, it may be added, from our own spirits: this vast tract is more accessible from Newton than from any other town. With these geographical advantages, being on the main Great Western line, with abundant train service, being also the junction for one line to the Moor *viâ* Chudleigh, Bovey and Moretonhampstead—and of another to the coast *viâ* Torquay, Paignton, Brixham (a fishing town worthy of a visit) and Dartmouth, Newton without question, and beyond all compare, offers to tourists and visitors, for “doing” South Devon easily and completely, facilities that do not exist elsewhere. In claiming all these places as suburbs of its own, it speaks, of course, from the traveller’s point of view and the claim is undoubtedly a just one. But, beyond this, Newton has attractions of its own—to the sportsman it offers abundant occupation of every sort; it is the headquarters of the South Devon fox-hounds and also the Haldon harriers, the leading packs of the locality. The town stands on the Teign, one of the best fishing streams, if not the best, in the west, and the beautiful river Dart is close to the next railway station at Totnes: shooting is good everywhere and the South Devon Cricket Club has its ground and pavilion in the town. To the student and the scientist, too, it offers attractions difficult to surpass, especially to those interested in geology and archæology. Standing on and amid hills that formerly formed the shores of a prehistoric lake, the only remnant of the miocene age in this country and now filled with the celebrated strata known as the Bovey Tracey beds; having within easy reach the marvellous hollows in the limestone rocks called Kent’s Hole and Brixham Cave; being able to shew in itself a wooden idol exhumed from a clay mine at a depth of twenty-six feet; offering fields for exploration amid the fossils of Haldon, in the numerous hut circles (the homes of our ancestors in the stone and bronze ages) on Dartmoor, in the bold rocky coast line, and above all, in the concentration of these at the geological museum of Torquay, which, properly understood, is an education in itself, this part of the county presents to the studious mind a rocky history of the earth and of man perhaps clearer and more easily to be read than any other that has yet come to our knowledge. The sea fisheries too are not without an engaging side, but is too long a subject to be entered on here. This, however, is certain that whatever may be the advantages of any town or place in the Southern part of the Country, and they are many, the visitor who takes up his abode at Newton has them all, everyone and without exception, readily at his hand: they are at least as accessible as, say, the Zoological Gardens from Southwark, or the Tower of London from Kensington. It may be added that the average death-rate of the town during the last 13 years has been a little over 15 per 1,000 of population, and its water supply is the same as that of Torquay.

Mr. L. Stevens, Surveyor and Inspector, reports the following in his department:—

The work effected in improving the sewerage system of this district, which has been steadily carried on during the past year, may be classed under the following two heads, viz., No. 1, laying of new sewers; and No. 2, taking out of old stone built sewers and replacing with glazed stoneware socket pipes.

Under the former heading, first should be mentioned a sewer from the district of the Decoy and Torquay Road to the outfall works: in carrying out this, a length of 1,385 feet of 12 inch socket pipe has been utilized and important alterations made at the outfall works by which

a better gradient was obtained. The lower sedimentary tank has been extended by a 40 feet addition and an enlargement of the area plates has materially reduced the quantity of silt in the sewers, the removal of which causes so much periodical trouble. A sewer has also been constructed on Wolborough Hill from the corner of the College Road to South Road: this 1,300 feet run of 7 inch socket pipe has been laid to relieve the sewer passing through Laureston Road.

Under the second heading the most important work carried out was at Fairfield Terrace where the old stone sewer at the back of the western row of houses has been taken out and new glazed socket pipes laid in its place at a lower depth and more even gradient: the portion done includes 370 feet of 9 inch socket pipe. In advantageous places 11 inspection holes have been formed and the various branch drains have been dealt with: in many instances also new water closets have been put in.

At the back of Nos. 34 and 36, Courtenay Street a similar work has been done in taking out the stone sewer extending to the rear of No. 5, East Street, which has been replaced with 210 feet of 9 inch socket pipe: here also the private drains were dealt with; and a favourable opportunity occurring a large iron vent shaft was fixed for ventilation.

Similar work has also been effected at the east end of Victoria Place, where an old and very defective sewer partly formed of stone and part of old pipe of very inferior description was taken out and replaced: 120 feet of 9 inch, 140 feet of 7 inch, and 25 feet of 6 inch pipe were here laid at an improved gradient.

In all cases the pipes have the improved joint (Stamford's) fitted to them, and inspection chambers have been formed for future access to and control of the sewers.

The important matter of dealing with the unsanitary state of the Courts has received attention: action has been taken with a view to closing some of the defective and unsanitary houses in No. 5 Court, Wolborough Street. The dealing with the Courts on the opposite side of Wolborough Street numbered 9 and 10 is also under consideration.

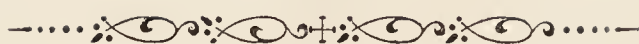
The utility of the smoke test to drains has again been shewn by the number of occasions it has been employed; 40 different premises have been tested with the following results, viz.:—In eleven cases serious defects were found in fittings indoors; in nine cases slight defects were made good indoors; in three cases the drains were taken up and relaid; in two cases bad defects were found in outdoor closets; in six cases the drains stood the test well; and in two instances the drains were found to be foul and offensive from a stoppage in the interceptor traps.

In the house to house inspection some 270 different houses were inspected with the result that in 18 cases the closets have had the old and defective pans taken out and modern constructions with water substituted. Four new closets have been built, while in many instances minor improvements have been effected, as making good defects in soil pipes and replacing defective sinks with yard gullies.

The usual disinfection of the Courts and crowded districts has been carried out: on three occasions the drains, w.c's. and sinks have been disinfected with perchloride of mercury, and the whole of the gullies of the district on different occasions have been flushed with disinfectants.

Thirteen notices have been served for the abatement of nuisances, including two for the removal of manure, four for foul privies, four from defective state of closet pans, whilst in two instances swine have been removed, and in one case poultry was forbidden in a small and confined yard.

DAWLISH.



The deaths registered in the urban part of this parish during 1896 numbered 71, of which 37 were in males and 34 in females, equal to an annual rate of 16·29 per 1000 on a population estimated at 4349 ; excluding those of four visitors, this falls to 15·4. The figure may be regarded as satisfactory. Reference to the appended table shews a considerable diminution of the death-rate during the last three years, a period sufficiently prolonged to almost arouse the hope of a permanent improvement. At all events such rates have only been occasional hitherto. In addition to these, there were three deaths in the workhouse assignable to Dawlish. In the successive quarters the numbers were 16, 21, 19 and 15.

Under the age of one year there were 14 deaths ; between the 1st and 5th years, 4 ; between 5 and 15 years, only 1 ; between 15 and 25 years, 5 ; between 25 and 65 years, 21 ; and over the latter age, 26.

Besides those mentioned in the table, the chief causes of mortality were constitutional diseases, other than the tubercular, 5 deaths, of which four were due to cancer ; diseases of the nervous system 9, of which four were from apoplexy and two from convulsions ; diseases of the digestive system, 7 ; of the urinary, 2 ; three were assigned to old age, one to premature birth, and two to infantile inanition.

The infantile death-rate, that of children under one year to every 1000 births, was 141. It will be observed that with a mortality below the average and in the absence of pronounced fatality from epidemics this figure has been high for three succeeding years. No other explanation offers than this—that whooping cough and measles cause considerable loss of life indirectly : the fluctuations that figures referring to small populations are liable to is a probable accessory cause,

The births of 99 children, 48 boys and 51 girls, are equal to an annual rate of 23·7 per 1000, rather higher than has obtained recently. The natural increase of population, the excess of births over deaths, is therefore 28; which curiously enough is the exact amount of the annual increment estimated for the statistics in this return, being the average shewn by the last census for the previous ten years.

ZYMOTIC DISEASES.—There were three deaths from the seven accepted and ordinary diseases of this group, all due to whooping cough and all in the second quarter, giving a rate of '68 per annum. There is little to be said on this subject. Sixteen notifications were received, all being scarlatina of the mildest type, without danger to life. I was enabled with the aid of school teachers, and looking up absentees, to discover others that had no medical aid. The first case was in April and they continued to appear, but with long intervals, almost until the end of the year. This slight epidemic was restricted to the upper and older part of the town, Stockton road being the original and chief centre. There were no notifications whatever of the more dangerous and significant maladies, diphtheria and typhoid fever, &c.

The year under observation has been in a sanitary sense uneventful and offers few points for comment. The question of an isolation hospital, which during the previous year had assumed a rather prominent position owing to the presence of typhoid fever in a numerous family and crowded house, has now subsided into quietness; a suggestion, however, was once made to utilize a mill on Dawlish water about two miles from the town, the property of the Council, for this purpose. On July 8th Col. Luard held a Local Government Board enquiry relative to an application for a loan to improve the supply of water on a plan suggested by Mr. Martin, Civil Engineer, of Exeter. So far, however, the matter has not been dealt with and a tendency of thought is now indicated at the Council's debates in the direction of making an additional reservoir at the Burrows, near the town, so as to increase the storage there. Personally, whilst not objecting, I do not eagerly concur in this policy, but consider that the radical remedy must be effected at the source by some method of conserving or adding to the quantity available there: it is obvious that in the end this method will have to be resorted to and has, therefore, a character of finality, not of temporary expediency, about

it, and any considerable expansion of the population would at once render it an urgent requirement. During the year a new sewer, of course on modern lines, has been laid down

	1896	1895	1894	1893	1892	1891	1890
Smallpox ... ..	...	...	...	...	...	...	...
Measles ... ..	...	...	...	...	1	...	3
Scarlatina ... ..	...	...	...	...	...	...	...
Whooping Cough	3	...	2	...	...	...	3
Diphtheria ... ..	...	...	...	1	1	...	2
Continued Fevers ... ..	...	...	...	...	...	...	1
Diarrhoea ... ..	...	...	...	...	1	...	...
<i>Deaths from 7 chief Zymotics</i> }	3	...	2	1	3	...	9
Phthisis	6	8	5	7	6	8	4
Others Tubercular	4	1	6	2	...	2	5
Bronchitis, Pneumonia. &c....	9	10	10	19	12	8	5
Heart Disease	11	5	4	12	7	12	14
Violence	1	5	4	5	5	2	4
Other Diseases	37	42	37	35	40	39	41
TOTAL FOR EACH YEAR	71	71	68	81	73	71	82
General Death-rate per 1,000	16·3	16·4	15·7	18·9	17·2	16·8	18·7
Ditto (excluding visitors) ...	15·4	14·0	14·1	17·0	13·2	14·1	14·2
Zymotic death-rate	·7	nil	·5	·2	·7	nil	2·0
Birth Rate	22·7	19·1	18·5	26·6	24·7	23·1	23·7
Deaths under 1 yr to 1000 births	141	168	162	96	94	51	106

in Regent street ; a desirable work, for on more than one occasion, and even this year suspicious disease had occurred in this locality : the old sewer here had no floor, fouled the soil greatly and was of the most primitive type. The Council has in recent years adopted the prudent and economical policy of renewing the sewerage of the town by degrees and out of revenue. The whole of this work has been completed, except in a part of High street, at Town Tree hill, and the removal of the capacious brick culvert extending along Manor Row to the upper end of Brunswick place. The cost of these renewals was estimated at £390 and it was suggested that £130 be expended annually so that the work be done in three years. A movement, however, has lately been made in the direction of effecting the whole improvement at once and by loan. Whilst no part of my duty to oppose this, I cannot help sympathising with those who approve the judicious record of the past shewn in the carrying out of this great but not directly remunerative work without involving the town in further debt, and think it would be almost a pity at this late period to spoil the record by a change of policy. However, £130 seems a small sum to expend annually ; three years, too, seems a long time over which to spread £390 worth of work and if the reformers can expedite matters it might be well. The labourers of Dawlish are not highly paid and a kindly desire toward them is expressed by some to draw this matter out over a few years so as to provide them with work without unduly delaying progress. Amongst the various questions that have arisen during the year was a curious one referring to the churchyard, against which it was alleged that the graves therein were contaminating the river. Having in company with the Surveyor, and an official of the church made an investigation into the subject I reported to the Council that I could discover no grounds for the allegations.

Mr. J. S. Delbridge, Surveyor and Inspector, reports the following work during the year :—

The substitution of 180 yards of 9 inch socket pipe for the old stone sewer in Regent Street, and at Piermont Place a similar renewal to the extent of 40 yards. The drains of Ermenhurst Villa, of Sigford House, of No. 6 Strand, and No. 17, Queen Street have been entirely renovated : all these have been fitted with new traps and vent shafts. In the High Street and at Idlesleigh Terrace 260 yards of concrete foot-paths have been laid. Forty visits have been paid to dairies, slaughter-houses and bake-houses.

